



Docket No. 2007-0204-WDW
Permit No. WDW413

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
under Provisions of Texas Water Code,
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

TexCom Gulf Disposal, LLC
3600 South Gessner Road
Suite 200
Houston, TX 77063
(713) 914-9193

II. Type of Permit

Initial X Renewal _____ Amended _____
Commercial X Noncommercial _____
Hazardous _____ Nonhazardous X _____
Onsite X Offsite X _____
Authorizing Disposal of Waste from Captured Facility _____
Authorizing Disposal of Waste from Off-site Facilities Owned by
Owner/Operator _____

III. Nature of Business

Commercial nonhazardous wastewater treatment and disposal

CONTINUED on Pages 2 through 7

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

ISSUED: JUN 03 2011

A handwritten signature in black ink, reading "Bryan W. Shaw".

For The Commission

IV. General Description and Location of Injection Activity

The disposal well is to be used to dispose of nonhazardous wastes generated by the permittee's facility and from other sources. The well will be located 275 feet south of the north boundary and 300 feet east of the west boundary of the T.C. Howell Survey, A-272, Latitude 30°17'42.4" North, Longitude 95°23'20.2" West, Montgomery County, Texas. The injection zone is within the Cockfield Formation at the well log depths of 5134 to 6390 feet. The authorized injection interval is within the Cockfield Formation at the well log depths of 6045 to 6390 feet.

V. Drilling and Completion Requirements

- A. The drilling and completion of the well shall be done in accordance with 30 TAC §331.62, the plans and specifications of the permit application, and the following conditions.
- B. The permittee shall set and cement surface casing to a minimum subsurface depth of 4110 feet and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.
- C. To protect the ground surface from spills and releases, the base of the wellhead shall be enclosed by a diked, impermeable pad or sump. Any liquid collected shall be disposed of in an appropriate manner.
- D. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.
- E. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

- A. Industrial nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:
 - 1. Aqueous waste with low solvents
 - Aqueous waste with low other toxic organics
 - Spent acid without metals
 - Acid aqueous waste
 - Spent caustic
 - Caustic aqueous waste
 - Aqueous waste with reactive sulfides
 - Other aqueous waste with high dissolved solids
 - Other aqueous waste with low dissolved solids
 - Scrubber waste

Other inorganic liquids
Brine solution that could also bear the form code 113
Halogenated/non-halogenated solvent mixture
Oil water emulsion or mixture
Concentrated aqueous solution of other organics
Paint thinner or petroleum distillates
Other organic liquids
Ethylene glycol based antifreeze

2. Other associated wastes such as ground water and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
 3. Nonhazardous wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted wastes, injection zone and the well.
- B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Cockfield Formation within the injection zone between 5134 to 6390 feet.
- C. The pH of injected waste streams shall be greater than 3.0 and less than 9.0.
- D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall be greater than 0.9 and less than 1.05 as measured at 68°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited. The permittee is also required to comply with all other laws or regulations which are applicable to the activities authorized by this permit.

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the EPA, including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health & Safety Code §401.003(3);
- C. Any low-level radioactive waste as defined by Texas Health & Safety Code §401.004;

- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health & Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

- A. The well shall be operated in compliance with the requirements of 30 TAC Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions.
- B. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate USDWs and fresh or surface water.
- C. The operating surface injection pressure shall not exceed 1250 psig.
- D. The maximum cumulative injection rate for WDW410, WDW411, WDW412 and WDW413 shall not exceed 350 gallons per minute.
- E. The cumulative volume of waste water injected into WDW410, WDW411, WDW412 and WDW413 shall not exceed 15,624,000 gallons per month, or 183,960,000 gallons per year.
- F. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100-psig pressure differential. If a minimum 100-psig pressure differential cannot be achieved within 15 minutes, the permittee shall notify the Texas Commission on Environmental Quality (TCEQ) and commence shut-in procedures on the well. The permittee may continue to operate the well under flow conditions that maintain a minimum 100-psig pressure differential.
- G. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall

include plans for the proposed work. The Executive Director may grant an exception to the prior written notification and approval when immediate action is required to prevent pollution according to 30 TAC §331.5. Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of all well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.
- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(a) and the approved waste analysis plan.
- G. The pH and specific gravity of the injected waste shall be monitored continuously or whenever the waste stream changes.
- H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as

those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, 30 TAC Section 305.154(a)(9), and Sections 331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$147,000 (in 2005 dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

- A. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- B. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapters 26 and 27, and Texas Health and Safety Code, Chapter 361.
- C. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- D. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- E. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. Consolidated Permits, 30 TAC Chapter 305;
 - 2. Underground Injection Control, 30 TAC Chapter 331; and
 - 3. Industrial Solid Waste and Municipal Hazardous Waste, 30 TAC Chapter 335.

- F. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- G. This permit is based on, and the permittee shall follow the plans and specifications contained in the Class I Underground Injection Control Application dated July 29, 2005 as revised on January 25, 2006, February 22, 2006, March 17, 2006, April 6, 2006 and April 19, 2006 which is hereby approved subject to the terms of this permit and any other orders of the TCEQ. These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.
- H. The express incorporation of the above-cited permit application as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all laws or regulations which are applicable to the activities authorized by this permit.
- I. The Texas solid waste registration (SWR) number for this site is 87758.
- J. Pre-injection surface units associated with the well are to be authorized by Industrial Solid Waste Permit number 87758.
- K. The permittee shall relocate the entrance of the facility to FM 3083 prior to accepting deliveries of waste.